

REVISIONS TO MATERIALS SAMPLING GUIDE July 1, 2013 Edition

Section 3, Asphaltic Concrete	
Page 3-1, Material 1) Asphaltic Concrete Type SPH, SPR	
	Field Personnel
	Added – and randomly selected lots thereafter.
	Central Lab
	Removed – A sample consisting of six specimens is required from the first lot of field production.
Page 3-2, Added material requirements for Warm Mix Asphalt (Chemical Additives)	
	Material – 7) Warm Mix Asphalt (Chemical Additives)
	Added – 7) Warm Mix Asphalt (Chemical Additives)
	Type of Test
	Added – Quality
	QC Sampling and Testing by Contractors
	Added – -----
	Field Personnel
	Added – Warm Mix Asphalt is accepted with a binder- delivery ticket that states the type of additive and the percentage or amount used
	Branch Lab
	Added – -----
	Central Lab
	Added – -----
	Location of Additional Information
	Added – -----
Section 9, Grading	
Page 9-1, Material 1) Embankment (Cohesive and Granular) – Moisture Density	
	Field Personnel
	Removed – each 1000-3000 cubic yards
	Added – every 1,000 feet for each lift and fill
Page 9-1, Material 1) Embankment (Cohesive and Granular) – Gradation (if Specified)	
	Field Personnel
	Removed – each 1000-3000 cubic yards
	Added – every 1,000 feet for each lift and fill

Section 15, Portland Cement Concrete for Pavement, Base Course, Pavement Patching		
Page 15-1, Material 1) Coarse Aggregates		
QC Sampling and Testing by Contractors		
		Removed – - - - -
		<p>Added – One gradation test for each 1,000 ton of aggregate or fraction thereof, for acceptance either at the plant or on the project.</p> <p>Minimum of one gradation test for each project.</p> <p>The number of samples taken from the plant is determined by plant volume supplied to state and federal projects, not per project (60-pound sample is required).</p>
Field Personnel		
		<p>Removed – One gradation test for each 1,500 ton of aggregate or fraction thereof, for acceptance either at the plant or on the project. Minimum of one gradation test for each project.</p> <p>The number of samples taken from the plant is determined by plant volume supplied to state and federal projects, not per project (60-pound sample is required. Project personnel will supply the 60-pound sample needed to perform the testing shown under the Central Lab column.</p>
		<p>Added – <u>Verification</u>: Project personnel will randomly select one contractor's split sample (30 pounds) for each 3,000 ton or fraction thereof, for central lab.</p> <p><u>Quality</u>: Project personnel will supply a 60-pound sample for central lab.</p>
Central Lab		
		<p>Removed – One 60-pound independent assurance sample for gradation and quality tests for each 4,500 ton or fraction thereof. (Duplicate of sample tested in the field)</p>
		<p>Added – One contractor's split verification sample for each 3,000 ton or fraction thereof, for gradation tests.</p> <p>One 60-pound sample for every 3,000 ton or fraction thereof, for quality tests</p>
Page 15-1, Material 2) Fine Aggregate Sand Gravel		
Type of Test		
		Added – Colorimetric, Percent Clay
QC Sampling and Testing by Contractors		
		Removed – - - - -
		Added – One gradation test for each 2,000 ton of aggregate or fraction thereof, for acceptance either at

			<p>the plant or on the project.</p> <p>Minimum of one gradation test for each project.</p> <p>The number of samples taken from the plant is determined by plant volume supplied to state and federal projects, not per project (60-pound sample is required).</p>
		Field Personnel	
			<p>Removed – One gradation test for each 2,000 ton of aggregate or fraction thereof, for acceptance either at the plant or on the project.</p> <p>Minimum of one gradation test for each project.</p> <p>The number of samples taken from the plant is determined by plant volume supplied to state and federal projects, not per project (the recommended sample size is 25 pounds)</p> <p>Project personnel will supply the 10 and 60 pound samples needed to perform the testing shown under the Central Lab column.</p>
			<p>Added – <u>Verification</u>: Project personnel will randomly select one contractor's split sample (15 pounds) for each 6,000 ton or fraction thereof, for central lab.</p> <p><u>Quality</u>: Project personnel will submit DR Form 324, Source of Aggregates to be Used, to the central lab.</p>
		Central Lab	
			<p>Removed – One 60-pound independent assurance sample for gradation and quality tests for the first 6,000 ton if designated on DR Form 324, Source of Aggregates to be used.</p> <p>One 10-pound verification sample for gradation tests for each 6,000 ton, or fraction thereof, thereafter. (Duplicate of sample tested in the field)</p>
			<p>Added – One contractor's split verification sample for each 6,000 ton or fraction thereof, for gradation tests.</p> <p>One 60-pound sample for every 6,000 ton or fraction thereof, for quality tests</p>
Page 15-2, Material 3) All Aggregates			
QC Sampling and Testing by Contractors			
			Removed – - - - -
			Added – A minimum of one for every 1/3 day of operation as necessary for adequate control of

			aggregate proportions and total water content of the concrete.
		Field Personnel	
			Removed – A minimum of one for every 1/3 day of operation as necessary for adequate control of aggregate proportions and total water content of the concrete
			Added – -----
Section 16, Portland Cement Concrete for Structures, Culverts and Miscellaneous Construction			
		Page 16-1, Material 1) Coarse Aggregates	
		QC Sampling and Testing by Contractors	
			Removed – -----
			Added – One gradation test for each 1,000 ton of aggregate or fraction thereof, for acceptance either at the plant or on the project. Minimum of one gradation test for each project. The number of samples taken from the plant is determined by plant volume supplied to state and federal projects, not per project (60-pound sample is required).
		Field Personnel	
			Removed – One gradation test for each 1,500 ton of aggregate or fraction thereof, for acceptance either at the plant or on the project. Minimum of one gradation test for each project. The number of samples taken from the plant is determined by plant volume supplied to state and federal projects, not per project (60-pound sample is required).
			Added – <u>Verification</u> : Project personnel will randomly select one contractor's split sample (30 pounds) for each 3,000 ton or fraction thereof, for central lab. <u>Quality</u> : Project personnel will supply a 60-pound sample for central lab.
		Central Lab	
			Removed – One 60-pound independent assurance sample for gradation and quality tests for each 4,500 ton or fraction thereof. (Duplicate of sample tested in the field)
			Added – One contractor's split verification sample for each 3,000 ton or fraction thereof, for gradation tests. One 60-pound sample for every 3,000 ton or fraction thereof, for quality tests

Page 16-1, Material 2) Fine Aggregate Sand Gravel	
	Type of Test
	Added – Colorimetric, Percent Clay
	QC Sampling and Testing by Contractors
	Removed – - - - - - - - - -
	<p>Added – One gradation test for each 2,000 ton of aggregate or fraction thereof, for acceptance either at the plant or on the project.</p> <p>Minimum of one gradation test for each project.</p> <p>The number of samples taken from the plant is determined by plant volume supplied to state and federal projects, not per project (60-pound sample is required).</p>
	Field Personnel
	<p>Removed – One gradation test for each 2,000 ton of aggregate or fraction thereof, for acceptance either at the plant or on the project.</p> <p>Minimum of one gradation test for each project.</p> <p>The number of samples taken from the plant is determined by plant volume supplied to state and federal projects, not per project (the recommended sample size is 25 pounds)</p> <p>Project personnel will supply the 10 and 60 pound samples needed to perform the testing shown under the Central Lab column.</p>
	<p>Added – <u>Verification</u>: Project personnel will randomly select one contractor’s split sample (15 pounds) for each 6,000 ton or fraction thereof, for central lab.</p> <p><u>Quality</u>: Project personnel will submit DR Form 324, Source of Aggregates to be Used, to the central lab.</p>
	Central Lab
	<p>Removed – One 60-pound independent assurance sample for gradation and quality tests for the first 6,000 ton if designated on DR Form 324, Source of Aggregates to be used.</p> <p>One 10-pound verification sample for gradation tests for each 6,000 ton, or fraction thereof, thereafter. (Duplicate of sample tested in the field)</p>
	Added – One contractor’s split verification sample for each 6,000 ton or fraction thereof, for gradation tests.

			One 60-pound sample for every 6,000 ton or fraction thereof, for quality tests
	Page 16-2, Material 4)	All Aggregates	
		QC Sampling and Testing by Contractors	
			Removed -----
			Added – A minimum of one for every 1/3 day of operation as necessary for adequate control of aggregate proportions and total water content of the concrete.
		Field Personnel	
			Removed – A minimum of one for every 1/3 day of operation as necessary for adequate control of aggregate proportions and total water content of the concrete.
			Added -----
	Page 16-3, Material 7)	Plastic Concrete	
		Location of Additional Information	
			Removed – Note 7
	Page 16-3, Material 8)	Lightweight Concrete	
		Location of Additional Information	
			Removed – Section 27, Note 7
Section 19, Culvert Pipe, Drain Tile, Sewer Pipe, Slope Drains, etc.			
	Page 19-1, Material 1Ab)	Culverts (Plastic)	
		Location of Additional Information	
			Removed – Section 27, Note 11
			Added -----
	Page 19-2, Material 3B)	Sewer Pipe (Plastic)	
		Sample Required (Tests to be Made at Central Laboratory)	
			Removed – sample two feet long from each size unless pipe meets requirements shown in the special provisions. If pipe is that shown in special provisions, the Project Manager should verify diameter and advise the Materials and Research Division of the pipe markings.
			Added – 10' section from each lot.
		Location of Additional Information	
			Removed – Section 27, Note 11
			Added -----
Section 20, Bridge Materials			
	Page 20-5, Added material requirements for Material 29)	Epoxy Polymer Overlay	

	Item or Group
	Added – Material 29A) Type III Epoxy
	Sample Required
	Added – Yes – One 16-oz. sample for each component.
	Approved Products List
	Added – No
	Manufacturer Certified Tests Required
	Added – Yes
	Manufacturer Certification of Compliance Required
	Added – Yes
	Location of Additional Information
	Added – -----
	Item or Group
	Added – Material 29B) Crushed Siliceous Gravel
	Sample Required
	Added – Verification: Yes – 60-pound project sample for central laboratory. Project Acceptance: Yes – 10-pound sample for field testing.
	Approved Products List
	Added – No
	Manufacturer Certified Tests Required
	Added – No
	Manufacturer Certification of Compliance Required
	Added – No
	Location of Additional Information
	Added – -----
Section 21, Lighting and Signal Materials	
	Page 21-1, Material 1A) Anchor Bolts for Light, Signal, Span Wire and Combination Poles
	Manufacturers Certified Tests Required
	Removed – No
	Added – Yes
Section 21, Lighting and Signal Materials	
	Page 21-2, Material 2Da) Conventional Light Pole
	Manufacturers Certified Tests Required
	Removed – No

			Added – Yes
Section 21, Lighting and Signal Materials			
	Page 21-2, Material 2Db) High Mast Pole		
		Manufacturers Certified Tests Required	
			Removed – No
			Added – Yes
Section 21, Lighting and Signal Materials			
	Page 21-2, Material 2Dc) Signal Standards		
		Manufacturers Certified Tests Required	
			Removed – No
			Added – Yes
Section 21, Lighting and Signal Materials			
	Page 21-2, Material 2Dd) Span Wire Pole		
		Manufacturers Certified Tests Required	
			Removed – No
			Added – Yes
Section 21, Lighting and Signal Materials			
	Page 21-2, Material 2De) Breakaway Base		
		Manufacturers Certified Tests Required	
			Removed – No
			Added – Yes
Section 27, Notes			
	Page 27-1, Note 1, Sampling and Testing of Small Quantities of Noncritical Materials		
			Removed – except those
			Added – quality testing of aggregate is required
	Page 27-4, Note 6, Portland Cement Concrete		
			Removed – Mandatory testing is required at 28 days. If the compressive strength is obtained earlier than 28 days, the remaining cylinders are not required to be tested, not to exceed specification time constraints.
			Added – Compressive strength testing is required until the design strength is obtained
	Page 27-6, Note 16, Combination Mast Arm Signal and Lighting Poles, Mast Arm Signal Poles, Span Wire Poles, Pedestal Traffic Signal Poles and Light Poles		
			Removed – Upon request by the Project Manager, t
			Added – T

			Added – certified
Section 28, Quality Assurance Program for Construction Materials			
Page 28-5-1, Materials Certification			
			Removed – , is on the National Highway System (NHS).
			Added – 5.1.1 Utilizes federal funding and is over \$1,000,000 or
			Added – 5.1.2 Subject to full federal oversight
Page 28-A-4, Sampling and Testing Personnel Qualification Program			
Field Technician			
			Removed – Batcher
			Added – Technician
			Removed – Fundamentals of Concrete
			Added – Concrete Field Inspector/General Handling of Concrete
Page 28-A-6, Sampling and Testing Personnel Qualification Program			
ACI Concrete Field Testing Technician			
			Added – Concrete Field Inspector/General Handling of Concrete
Concrete Plant Technician			
			Removed – Batcher
			Added – Technician
			Removed – Batcher
			Added – Technician
			Removed – Batcher
			Added – Technician
Page 28-A-7, Sampling and Testing Personnel Qualification Program			
Concrete Field Inspector/General Handling of Concrete			
			Removed – Fundamentals of Concrete
			Added – Concrete Field Inspector/General Handling of Concrete
			Removed – The Fundamentals of Concrete
			Removed – and
			Removed – concrete
			Removed – fundamentals
			Added – placement
			Removed – Fundamentals of Concrete
			Added – Concrete Field Inspector/General Handling of Concrete
Page 28-A-7, Sampling and Testing Personnel Qualification Program			

		Provisional Certification
		Removed – Fundamentals of Concrete
		Added – Concrete Field Inspector/General Handling of Concrete Provisional Certification
	Page 28-F-1, Annual FHWA IA Program	
	General Project and Lab Information – Federally Funded Projects Under Construction	
		Removed – on NHS
	Assessment of Technician Certification: Federally Funded State Projects	
		Removed – on NHS
	NDOR QA Program Totals	
		Added – Total Technician Certifications/Total Required
		Added – Percentage
		Added – Technician Certifications
		Added – Technician IAs
	Page 28-F-2, Annual FHWA IA Program	
	Assessment of Technician Certification Status	
		Removed – Concrete Plant Batcher
	Page 28-F-2, Annual FHWA IA Program	
	Assessment of Technician Certification Status	
		Removed – Concrete Plant Batcher
	Page 28-F-3, Annual FHWA IA Program	
	Assessment of Technician Certification: Federally Funded LPA Projects	
		Removed – on NHS
	Page 28-F-3, Annual FHWA IA Program	
	Assessment of Technician Certification Status	
		Removed – Concrete Plant Batcher
	Page 28-F-3, Annual FHWA IA Program	
	Assessment of Technician Certification Status	
		Removed – Concrete Plant Batcher
	Policy 4, Acceptance Policy for Portland Cement and Interground/Blended Cements	
	Page 29-12, Acceptance of Interground/Blended Cements	
		Removed – Portland Cement and
	Policy 8, Pipe Material Policy	
	Page 29-22, Pipe Material Policy	

			Removed – Pipe Material Policy
			Added -- This policy was removed effective July 1, 2013. For more information, please refer to the Drainage Design and Erosion Control Manual.